

REMARKS/ARGUMENTS

Claims 11-20 are pending in this application. By this Amendment, Applicant amends Claim 11.

Applicant's counsel appreciates the courtesies extended by the Examiner and the Examiner's Supervisor in the Telephone Interview on January 12, 2010. In the Telephone Interview, Applicant's counsel requested that the Examiner and the Examiner's Supervisor explain in detail how Konishi et al. (U.S. 5,635,115) is being interpreted to reject Applicant's Claim 11, in order to enable Applicant to fully respond to the outstanding Office Action, and particularly, to respond to the rejection of Claim 11 over Konishi et al.

The Examiner's Supervisor explained that the term "hermetically sealing" recited in Applicant's Claim 11 is being interpreted broadly, and that in Konishi et al., the hermetic sealing and closing of the bag 38a occurs after the bag 38a is depressurized by the vacuum force applied by the vacuum pump 38d via the tube 38b. The Examiner's Supervisor indicated that they are interpreting the "closing" of the bag 38a, and thus, the hermetic sealing of the bag, recited in Applicant's Claim 11, as occurring when the two sides of the bag 38a come into contact with each other after the inside of the bag is depressurized, i.e. when the air is sucked out of the bag 38a.

The Examiner's Supervisor acknowledged that Konishi et al. fails to teach or suggest any step of mechanically sealing the bag, and that the only "sealing" that occurs in Konishi et al. is produced as a result of the depressurization of the bag.

In view of the Examiner's Supervisor's explanation of the interpretation of Konishi et al., Applicant's Claim 11 has been amended to recite the feature of "a sealing step including sealing the electronic functional elements with a sealing resin member formed from the resin film by causing the resin film to infiltrate between the electronic functional elements mounted on the collective mounting substrate **with no reducing pressure being applied in the bag after hermetically sealing the contents inside the bag**" (emphasis added). Support for this feature is found, for example, in paragraphs [0055] to [0058] of Applicant's originally filed Substitute Specification.

Claims 11, 12, 16, and 17 were rejected under 35 U.S.C. § 102(b) as being anticipated by Konishi et al. Claims 13, 14, and 19 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Konishi et al. in view of Bureau et al. (U.S. 6,492,194). Claim 15 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Konishi et al. in view of Bureau et al., and further in view of Hikata et al. (U.S. 6,376,915). Claim 18 was rejected under 35 U.S.C. § 103(a) as being obvious of Konishi et al. Claim 20 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Konishi et al. in view of Komatsu et al. (JP 2000-306810). Applicant respectfully traverses the rejection of Claims 11-20.

Claim 11 has been amended to recite:

A method of manufacturing an electronic component comprising the steps of:

a mounting step including mounting on a collective mounting substrate a plurality of electronic functional elements, each of the plurality of electronic functional elements having a substrate and an electronic functional portion provided on the substrate;

an arranging step including arranging a resin film on the electronic functional elements mounted on the collective mounting substrate;

a reduced-pressure packaging step including putting the electronic functional elements and the resin film mounted on the collective mounting substrate in a bag that has a gas-barrier property, and hermetically sealing the contents inside the bag by closing an opening of the bag after depressurizing the inside of the bag;

a sealing step including sealing the electronic functional elements with a sealing resin member formed from the resin film by causing the resin film to infiltrate between the electronic functional elements mounted on the collective mounting substrate with no reducing pressure being applied in the bag after hermetically sealing the contents inside the bag; and

a dividing step including dividing the collective mounting substrate having the resin-sealed electronic functional elements into individual electronic functional elements. (emphasis added)

On page 3 of the Office Action, the Examiner alleged that Konishi et al. teaches a step of **"hermetically sealing the contents inside the bag by closing an opening of the bag after depressurizing the inside of the bag"**; The examiner interprets the reduced-pressure packaging step as such: hermetically sealing (via 38a, 38b, & 38d)

the contents (10, 20, 31) inside the bag (38a) (Fig. 7B) by closing [an opening of the bag] (e.g., the bag will be closed by forming of the bag around the contents during the heating process along with the vacuumizing effect created by (3d) an opening of the bag (38a) after depressurizing in the inside of the bag)."

As a result of the Telephone Interview on January 12, 2010 and the explanation provided therein, as noted above, Applicant's Claim 11 has been amended to recite the feature of "a sealing step including sealing the electronic functional elements with a sealing resin member formed from the resin film by causing the resin film to infiltrate between the electronic functional elements mounted on the collective mounting substrate **with no reducing pressure being applied in the bag after hermetically sealing the contents inside the bag**" (emphasis added).

Lines 22-28 of col. 14 of Konishi et al. disclose, "As shown in FIG. 7B, one end of a tube 38a is connected to an opening of the vacuum suction sack 38b under airtight conditions. Then, as shown in FIG. 7C, the vacuum suction sack 38a containing the multi-cavity circuit board 10, the sealing resin sheet 29, and the peeling sheet for surface finish 31 is placed in an oven 38c and **is heated while vacuumized with a vacuum pump 38d. By vacuumizing the vacuum suction sack 38a, the surface of the sealing resin can be formed into a desired state (e.g., mirror state, matte state) without air bubbles being mixed with the molten resin**" (emphasis added).

That is, Konishi et al. teaches that the step of sealing the resin is performed while the vacuum suction sack 38a, which the Examiner alleged corresponds to the bag recited in Applicant's Claim 11, is connected to the vacuum pump 38d and a reducing pressure is applied in the sack 38a. Konishi et al. fails to teach or suggest that the sealing step could or should be performed with no reducing pressure being applied in the sack 28a after hermitically sealing the content inside the sack 28a.

Thus, Konishi et al. certainly fails to teach or suggest the feature of "a sealing step including sealing the electronic functional elements with a sealing resin member formed from the resin film by causing the resin film to infiltrate between the electronic functional elements mounted on the collective mounting substrate **with no reducing**

pressure being applied in the bag after hermetically sealing the contents inside the bag" (emphasis added) as recited in Applicant's Claim 11.

Accordingly, Applicant respectfully requests reconsideration and withdrawal of the rejection of Claim 11 under 35 U.S.C. § 102(b) as being anticipated by Konishi et al.

In addition, it would not have been obvious to modify the method of Konishi et al. to include a step of sealing the electronic functional elements with a sealing resin member formed from the resin film by causing the resin film to infiltrate between the electronic functional elements mounted on the collective mounting substrate with no reducing pressure being applied in the bag after hermetically sealing the contents inside the bag as recited in Applicant's Claim 11.

As noted above, Konishi et al. specifically discloses, "By vacuumizing the vacuum suction sack 38a, the surface of the sealing resin can be formed into a desired state (e.g., mirror state, matte state) without air bubbles being mixed with the molten resin."

If the method of Konishi et al. was modified so as to include the feature of sealing the electronic functional elements with a sealing resin member formed from the resin film by causing the resin film to infiltrate between the electronic functional elements mounted on the collective mounting substrate with no reducing pressure being applied in the bag after hermetically sealing the contents inside the bag as recited in Applicant's Claim 11, then the method of Konishi et al. would clearly be unsatisfactory for its intended purpose of forming the surface of the sealing resin into a desired state without air bubbles being mixed with the molten resin, which requires the sack 38a of Konishi et al. to be depressurized during the sealing step, i.e., the application of a reducing pressure in the sack 28a of Konishi et al.

The Examiner is reminded that if the proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. In re Gordon, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984) and MPEP § 2143.01.

Bureau et al., Hikata et al., and Komatsu et al. were relied upon to allegedly cure various deficiencies of Konishi et al. However, Bureau et al., Hikata et al., and Komatsu et al. clearly fail to teach or suggest the feature of “a sealing step including sealing the electronic functional elements with a sealing resin member formed from the resin film by causing the resin film to infiltrate between the electronic functional elements mounted on the collective mounting substrate with no reducing pressure being applied in the bag after hermetically sealing the contents inside the bag” as recited in Applicant’s Claim 11. Thus, Bureau et al., Hikata et al., and Komatsu et al. fail to cure the deficiencies of Konishi et al. described above.

Accordingly, Applicant respectfully submits that Konishi et al., Bureau et al., Hikata et al., and Komatsu et al., applied alone or in combination, fail to teach or suggest the unique combination of features and method steps recited in Applicant’s Claim 11.

In view of the foregoing amendments and remarks, Applicant respectfully submits that Claim 11 is allowable. Claims 12-20 depend upon Claim 11, and are therefore allowable for at least the reasons that Claim 11 is allowable.

In view of the foregoing amendments and remarks, Applicant respectfully submits that this application is in condition for allowance. Favorable consideration and prompt allowance are solicited.

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The Commissioner is authorized to charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 50-1353.

Respectfully submitted,

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